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PSYCHE

VOL. XL SEPTEMBER, 1933 No. 3

TWO WASP-GUESTS FROM PUERTO RICO (MICROLEPIDOPTERA).

By Wm. T. M. Forbes,

Cornell University, Ithaca, N. Y.

The two following species were reared by Mr. Francisco Seín, Jr., from nests of Polistes, along with the well-known *Setomorpha insectella*, and two Pyralids, which are to be included in Dr. Schaus's revision of that family. One of these new species which is accompanied by the pupa has also been found in Cuba, making a description perhaps more advisable.

Tæniodictys, new genus

Head with smooth flat occiput, heavily tufted vertex, and smooth, strongly retreating front. Ocelli invisible, apparently absent; eyes large, labial palpi moderate, obliquely upturned or drooping (loosely held), clothed with irregular bristly scales, but without true bristles; maxillary palpi of folded type, the visible part short, drooping on each side of tongue, which is naked. Antennae with scape broad, concave and bristly-scaled, covering over half of eye but hardly a true eyecap, without pecten; shaft 5/6, smoothly scaled with one whorl to a segment. Body nearly cylindrical, the coxæ not flattened against the body; mid-tibiæ smooth-scaled, normal, hind tibiæ with spurs at 2/5, clothed above with bristly hairs, which are long except before the upper spurs; hind metatarsus also clothed above with some bristly hairs. Fore wing (fig. 1) linear, rather caudate; smooth and glossy; Sc short, R_1 absent, R_2 and R_3 free, arising from the upper side of the cell, which is represented by a ridge on the under side, there being no trace of a true vein; R_4 stalked with M_2, M_1 lost; M_3 normal, from same point of origin as stalks of R_4-M_2; Cu simple, a true vein all the way, exceedingly closely parallel to the ridge that represents R, so that the cell is linear; A short, sinuous, simple; 1st A represented by a slight fold only; hind wing under 1/2; fringe over 6; costa with sinuousity and specialized scales quite close to base, the vein Sc fading out only a little beyond it; Cu simple and short; the remaining veins represented only by ridges on the under side, which appear to represent Rs and three medians, the two upper connate; no cell.

This genus would belong to the Oinophilidæ, considering the well developed palpi (labial and maxillary) and semi-scavenger habits. By Meyrick's grouping it would be included in the Lyonetiidæ, whose typical members have lost the mouth-parts, and have smooth heads, and have larvæ feeding on living plants. The genus appears distinct, but in the complete absence of any attempt at a classification of the group it is difficult to be sure. I have not come across any genus in the group which shows the exceedingly narrow cell, and most of the few genera which have lost R_1 are Old World forms of quite different appearance.

Tæniodictys sericella, new species

Glossy ash gray, nearly immaculate. Top of head and thorax rather paler, with luteous tint, gradually shading into luteous on lower part of tuft and under side of head, antennæ pale pearl gray above, the scape more luteous; fore wing shading gradually into deeper gray toward apex and luteous white toward inner margin, the basal half of dorsal fringe markedly shaded with luteous. Hind wing clay color, the dorsal fringe also heavily shaded with brighter luteous. Legs dirty white, shaded on outer sides with light gray. Abdomen pale gray, the under side toward apex and anal tuft paler and yellower. 6-7 mm.

Lares, Puerto Rico, Dec. 1931, holotype and several paratypes reared from nests of *Polistes crinitus* by Fr. Seín, Jr., with a much larger number of the following species. Holotype in Cornell University collection, type No. 1240.

Antipolistes, new genus

Similar to Tinea. Head densely hairy all over, the hair above the antennæ tending to form two tufts, as usual; eyes very small, separated by more than 3 times their width; ocelli invisible; antennæ over 2/3, simple, scape simple, somewhat roughly scaled, without pecten or eyecap, shaft with one whorl of long scales to a segment, smooth toward base, somewhat rough outwardly; labial palpi moderate, drooping, second segment bristled, third rather shorter, fusiform; maxillary palpi invisible, and tongue absent; hind tibia with upper spurs between 1/3 and 1/4, the outer upper spur very long, reaching nearly to tip of tibia; loosely hairy above and with some loose hair below; tarsus not modified. Wings lanceolate (figs. 2 ♂, 3 ♀); fore wing with R_1 and Cu_1 lost, and one other vein (apparently M_1); the three apical veins stalked, but not always the same way; no accessory cell; R_5 running to costa, R_2 arising at 5/6, Cu_2 a little further out but hardly at angle. 1st A absent, 2nd A simple. Hind wing broad lanceolate, 2/3 fore wing, the costa a little sinuate beyond middle; subcosta ending beyond the sinuation but far before apex, R simple, free, M_1 lost, M_2 very weak and free, M_3 longer and free; Cu a much stronger vein, plainly forked at apex. No cell or anal veins. Fringe 3.

There are a few weak aculeæ at the base of the cell of the fore wing, besides the usual patch on the inner margin.

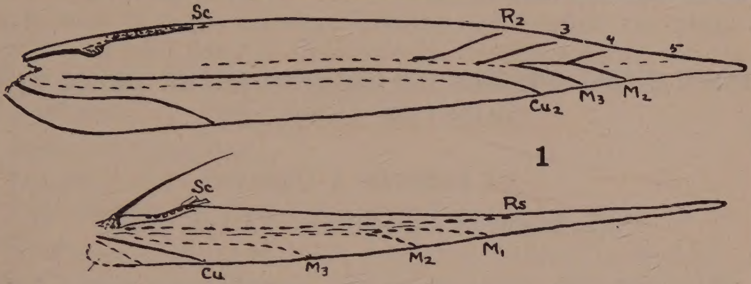
This genus is the most reduced of the Tineidæ known to me, the vein formula being 9-5; I judge it is a reduction of Achanodes, but the only genera that seem to have reached a similar stage of reduction in venation are the Indian Brachydoxa and Asyndetaula, which show by their short antennæ and smooth hind tibiæ that they do not belong to the true Tinea group. Meyrick's *Clepticodes hexaleuca* (Exot. Micr., iv, 324) must be similar, but if correctly placed by Meyrick has a much more complete structure:—with maxillary palpi folded, R_3 apparently free, and all three medials of hind wing preserved, but Cu_1 lost.

Antipolistes anthracella, new species

Coal black. Head lighter, wood brown to umber brown according to the light, becoming darker on under side of tuft and about mouth. Antennæ and palpi fuscous gray; legs pearl gray, the segments barred with dark gray, leaving pale bands at the joints, all very difficult to see clearly on account of the gloss of the scaling. Fore wing coal black, with four whitish spots, on the costa near middle and at 5/6, and in the fold at 1/3 and rather below the fold at 2/3; the spots variable in size, and tending to be relatively smaller in the female. Under side mouse gray. Female much like male, but noticeably larger, and apparently darker. ♂ 4 1/2 mm. ♀ nearly 6 mm.

Lares, Puerto Rico, holotype male and numerous specimens of both sexes reared by Fr. Seín, Jr., from nests of *Polistes crinitus,* in Dec. 1931; also several paratypes from Guabairo, Central Soledad, Cienfuegos, Cuba, reared from two nests of *Polistes cubensis* Lep. by Richard Dow. Holotype in Cornell University collection, type no. 1241, paratypes in Cornell University collection, Museum of Comparative Zoölogy and National Museum.

The larva appears to be unknown. Pupa (from Seín) similar to *Tinea pellionella* as figured by Miss Mosher (Bull. Ill. State Lab. Nat. Hist., xii, pl. 20, figs. 30, 31), sutures not clearly seen, prothorax depressed dorsally, maxillæ shorter, nearly obsolete, but maxillary palpi large and transverse; antennæ barely longer than fore wings; angulations of terminal segment ventral rather than lateral. The small round eyes are also more completely visible below the antennæ. Abdomen dorsally with first three segments unarmed; fifth and sixth with anterior rows of fine spinules; 7th and 8th also with coarser rows near the mid-segments, the latter rather sparse; ninth segment with two subdorsal clusters of about three spinules each and last with small pointed subdorsal cones.



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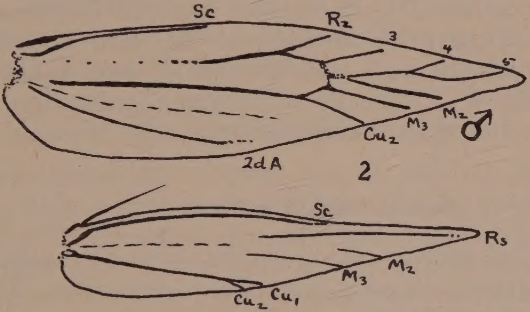

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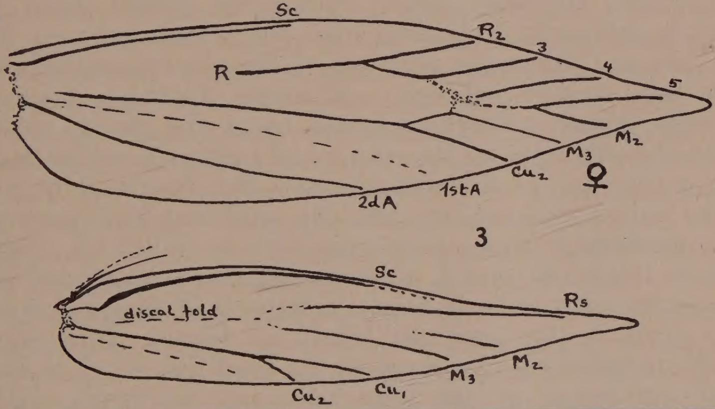

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Forbes—Microlepidopterous Wasp-Guests

FOUR NEW SPECIES OF CHIRONOMIDÆ FROM THE GREATER ANTILLES

By Bertram I. Gerry,

Department of Agriculture, Boston, Mass.

The material, from which the new Cuban species were isolated, was collected by Professor Nathan Banks of the Museum of Comparative Zoology of Harvard University. That from which the new Jamaica species were taken, was collected by Mr. W. S. Brooks of the same institution. The types may be found in the collection at the Museum mentioned above.

Bezzia banksi sp. nov.

Female.—Dull brown. Head brown, vertex grayish, eyes narrowly separated dorsally, antennæ pale brown. Thorax dull brown, pronotal lobes silvered dorsally, mesonotum dull brown, sparsely clothed with short golden hairs, a grayish pollinosity extending over the lateral portions of the disc and the upper portions of the pleurae, scutellum yellowish, halters whitish. Abdomen blackish brown, sparsely clothed with short golden hairs, the ground color somewhat obscured by the conspicuous grayish pollinosity, venter fulvous. Legs blackish brown, fore femora with six apical spines grouped five and one, mid and hind femora each possessing three apical spines; tarsi yellowish, first, second, third and fourth segments narrowly blackened at apices, the fifth entirely black; metatarsi of fore and mid legs equal to the combined length of second, third, and fourth tarsal segments, those of the hind legs equal to the combined length of the four remaining segments, fifth tarsal segments with two ventral rows of blunt tipped spines; tarsal claws long and equal, each possessing a large basal tooth. Wings hyaline, anterior veins light yellow, vein (R_1) terminating at costa before (R_3), vein (R_{4+5})

joining costa at a point six sevenths of the distance from wing base to apex, cubitus forking just beyond the crossvein; anal vein forked, the anterior branch joining the tip of vein (Cu_2) at the wing margin, posterior branch short and sinuous.

Male.—Undescribed.

Length.—3.00 mm.

Coll. by Nathan Banks, Soledad, Cienfuegos, Cuba. June.

This species will run to *B. setipes* Coquillett in Malloch's key for the genus Bezzia. Since, however, *B. setipes* possesses yellow fore and mid tibiæ and the number and arrangement of the femoral spines differ in the two species, they may be readily separated.

Tanypus brooksi, sp. nov.

Male.—Brownish yellow. Head yellow; antennæ light brown, longer than head and thorax combined, scape dark brown with greenish pruinescence, palpi yellow. Thorax light brown, pronotum with silvery sheen, mesonotum with dark ground color nearly obscured by heavy greenish pruinescence, pleurae pale brown with slight pruinescence, scutellum yellowish, postnotum blackish brown with greenish pruinescence, halters yellow with blackish knob. Abdomen yellow, segments three to seven yellow with brown basal bands, segments seven and eight black with conspicuous whorls of long coarse blackish hairs, venter yellow. Legs pale brown, clothed with short brownish hairs; femora pale brown, tibiae yellowish, the apices narrowly brown; tarsi pale yellow, the apices of segments one, two and three narrowly brown; fourth and fifth segments entirely brown, ratio between fore tibiae and fore metatarsi (14-9). Wings whitish, unspotted, sparsely clothed with short brownish hairs, veins nearly colorless, costa terminating in front of apex, vein (R_1) at a point two-fifths the distance from crossvein to end of costa, vein (R_{4+5}) terminating at a point three-fifths the distance from crossvein to tip of costa, crossvein not infuscated. Hypopygium yellow, coxites long and blunt; styli narrow, resembling those of *T. illinoensis* but possessing a simple tip as in *T. hirtipennis*.

Female.—Undescribed.

Length.—2.50 to 3.00 mm.

Coll. by W. S. Brooks, Moneague, Jamaica. January.

The outstanding characteristics of this species are as follows:—heavy greenish pruinescence of mesonotum and silvery pruinescence of pronotum; brown basal bands of abdominal segments three, four, five and six; the blackish seventh and eighth abdominal segments with whorls of long, black, spine-like hairs; conspicuous yellow coxites of the hypopygium.

Chironomus jamaicensis sp. nov.

Male.—Yellowish green. Head yellow, antennæ brown, scape brown, palpi yellowish brown. Thorax yellow, mesonotum yellow with wide reddish vittae, pleurae yellowish, scutellum pale greenish yellow, postnotum brown; halters pale yellow to white, the apex slightly greenish. Abdomen yellow, the first three basal segments often greenish, remaining segments including the hypopygium pale brown, venter greenish yellow. Legs yellow, mid and hind legs sparsely clothed with long brownish hairs, coxae yellowish, fore femora dark brown, mid and hind femora greenish yellow; fore tibiae brownish, the apices narrowly blackened, apical comb absent; mid and hind tibiae yellowish with conspicuous black apical combs; fore tarsi entirely brown, metatarsi nearly twice as long as fore tibiae, ratio between fore tibia and tarsal segments as follows 40—70, 40, 30, 25, 15; mid and hind tarsi brownish yellow, the distal half of second and the entire third, fourth and fifth segments blackened. Wings hyaline, veins pale yellow, crossvein not infuscated, vein (R_1) joining the costa at a point slightly more than half the distance from crossvein to tip of vein (R_{4+5}), media and (R_{4+5}) equidistant from wing apex, cubitus forking distinctly beyond crossvein. Hypopygium similar to that of *C. decorus*.

Female.—Agrees with male regarding color.

Length.—3.50 to 4.00 mm.

Coll. by W. S. Brooks, Moneague, Jamaica. February.

This species appears to be closely related to *C. decorus* and *C. serus* from the standpoint of male hypopygium, but differs from these in regard to abdominal markings, the absence of any discernible infuscation of the crossvein, and also in the fork of the cubitus which is located beyond the crossvein.

Chironomus bulbosa sp. nov.

Male.—Yellow, marked with green. Head greenish yellow, antennæ brown, plume whitish at base, scape pale brown. Thorax greenish with reddish vittæ, scutellum green, postnotum yellow, halters white with greenish apices. Abdomen greenish yellow, sparsely clothed with short yellow hairs. Legs pale green; fore femora and fore tibiæ light brown, narrowly blackened at apices; fore metatarsus less than one and one-half times length of fore tibia (10-13); mid and hind femora and tibiæ greenish yellow, densely clothed with long yellowish hairs; tarsi pale brown, the fourth and fifth segments blackened. Wings hyaline, greenish at base, veins pale brown, vein (R_{4+5}) and media equidistant from wing apex; cubitus forking beyond the crossvein. Hypopygium brownish yellow; the coxites and inner processes large, curved and leaf-like, forming a conspicuous bulb at tip of abdomen.

Female.—Differs slightly in coloration, i.e., the head, greater portion of thorax, and the abdomen are a deeper green.

Length.—3.00 to 3.50 mm.

Coll. by Nathan Banks, Soledad, Cienfuegos, Cuba. August.

The male of this species may be easily identified by the bulbose form of the hypopygium.

CYATHOMYRMEX, A NEW NAME FOR THE SUBGENUS CYATHOCEPHALUS EMERY.

By William Steel Creighton,

Dept. of Biology, College of the City of New York.

The purpose of this note is to call attention to the existence of a synonym in the case of the generic name *Cyathocephalus*. This name was first used by the helminthologist Kessler in 1868 and repeated as the name of a subgenus of ants by Emery in 1915. With several excellent compilations of generic names at the disposal of the taxonomists it is surprising that the repetition has escaped detection for a period of almost eighteen years. The history of this synonym is instructive since it is a perfect example of the evils arising from what may be called a buried subgenus. It is obvious that the task imposed upon the compilers of generic and subgeneric lists is yearly growing more onerous. In justice to the men who have undertaken this herculean labor as well as for the sake of their own subject taxonomists should bend every effort to make the names of new subgenera as prominent as position and typography will permit. The present case demonstrates how easily confusion can arise when this practice is not followed.

In 1868 Kessler erected the genus *Cyathocephalus* to include a single species of a Cestode worm previously described by Pallas (1781) under the specific name *truncatus*. Kessler's work appeared in Russian in the Proceedings of the Russian Naturalists Society of St. Petersburg. Because of linguistic difficulties or, as seems more probable, because of the great rarity of the early issues of this periodical Kessler's description did not come to the attention of the compilers for a number of years. The first standard compilation to list the genus *Cyathocephalus* seems to have been Bronn's Klassen und Ordnungen des Tier Reichs. In 1894 this publication carried a reference to a paper by Brauns in which the genus was mentioned. Four years later the genus *Cyathocephalus* appeared in the Zoological Record, this time having been brought to light by Riggenbach when he described a second species in the genus. It is natural to suppose that the name *Cyathocephalus* would have been listed in the Record's Index of Genera covering the period from 1891 to 1900. Actually it occurs in the Index for 1901 to 1910. The genus does not, of course, appear in Sherborn's Index Animalium since at present this colossal publication deals only with descriptions made prior to 1850. Heider includes Kessler's *Cyathocephalus* in his Nomenclator Animalium citing Braun's paper as his source. I am at a loss to account for the absence of Emery's synonymic subgenus in this publication for, as will be subsequently shown, there is no reason for the omission of the subgenus *Cyathocephalus* in any list made after 1921.

So much for the taxonomic history of the original *Cyathocephalus*. Let us now consider the case of Emery's synonym. In 1915 Emery published a brief paper in the Bulletin of the Entomological Society of France entitled "Names of Subgenera and Genera proposed for the Subfamily Myrmicinae." In an explanatory preface Emery states that the paper presents a summary of work prepared for inclusion in Wytsman's Genera Insectorum. At that time this publication had been suspended on account of the World War and it is easy to appreciate Emery's anxiety to get his work into print. It may be questioned, however, that any circumstances justify the means which he took to insure the priority of his classification. In his paper, three pages in length Emery established eleven new subgenera. Five of these were delimited at least by a line or two of description but the remaining six were set up by simply designating a type. Emery's position was, nevertheless, technically secure since all of his subgenotypes were previously described species. Regardless of what attitude we take as to the propriety of this procedure there can be no question that Emery made a serious mistake by incorporating the names of six of his new subgenera in the text of the article in such a manner that it is virtually impossible to discover their existence. Nor does Emery's culpability end here since, through oversight, he used the name *Cyathocephalus* for one of his new subgenera. As has already been shown this name was present in two standard compilations prior to the year 1915. There is, consequently, no way in which Emery could have justified his repetition of the name.

Emery's paper was duly entered in the Zoological Record for 1915 and it is interesting to see what they made of it. Three of the subgenera were prominently placed in a key and noted as new in bold face type. Immediately following this key were two line descriptions of two more new subgenera which were also noted in bold face. All five of these are listed in the index of the Zoological Record for the year 1915. The remaining six subgenera were incorporated in several short paragraphs which together total slightly more than three hundred words. Of these seventy-nine are italicized. To make matters worse the italics may be specific, generic or tribal names and in one case they refer to a publication. Is it any wonder, since Argus could not be called to the aid of the compilators, that the names of the six new subgenera escaped notice? It may be said in Emery's defense that his masterly treatment of the Myrmicinae in the Genera Insectorum, when that section was published in 1921, does much to condone this rare lapse from taxonomic grace. At the same time it cannot be too strongly stressed that the practice of embodying the names and description of new subgenera as a part of the text is pernicious in the extreme. The very facility with which this can be done, especially if the subgenotype is one of previous description, makes it especially dangerous.

There remains the duty of assigning a new subgeneric name to replace Emery's synonym. With a view to minimizing the change and retaining a term which is very aptly applied to the curious, cup-headed workers of this group I propose the following alteration:

Subgenus **Cyathomyrmex** nomen novum, to replace the synonymic subgenus *Cyathocephalus* Emery. The subgenotype *Cryptocerus pallens* Klug, the subgeneric characteristics as delimited by Emery in the Myrmicine section of the Genera Insectorum.

NOTES ON HIPPOBOSCIDAE

7. A TENTATIVE KEY TO THE SPECIES OF *OLFERSIA* WIEDEMANN (*FERONIA* LEACH; *PSEUDOLFERSIA* COQUILLETT).

By J. Bequaert

Department of Tropical Medicine,
Harvard Medical School, Boston, Mass.

A prolonged study of extensive material has led me to recognize more species of *Olfersia* than is customary at present. Pending the more detailed publication of my results, I offer herewith a key to the species which I regard as valid. Full acknowledgments will be given later; but I wish to thank now Prof. G. F. Ferris for entrusting me with his entire collection of the genus, as well as Mr. J. E. Collin for the detailed study of Bigot's types which he made at my request.

Key to Species

1. First basal cell (R) short and wide, distinctly bulging before the apex; fourth longitudinal vein (M_{1+2}) partly setulose. First tergal plate of abdomen triangularly excised at apex in male, divided into two median lobes in female...*O. sordida* Bigot.
   First basal cell (R) long and narrow, its apical half parallel-sided or nearly so; fourth longitudinal vein (M_{1+2}) bare throughout. Apical margin of first tergal plate straight or slightly curved inward........................2.
2. Posterior orbits (above eyes) about as long as or barely shorter than the greatest width of the inner orbits; occipital margins of posterior orbits and of postvertex (or vertical plate) strongly produced behind and separated from one another by deep curved notches. Lower, frontal area of postvertex alutaceous, separated from the upper, smoother area by a slight transverse depression..3.

Posterior orbits much shorter than the greatest width of the inner orbits; occipital margins of posterior orbits and of postvertex scarcely produced and separated by shallow curves .... 4.

3. Occipital margin of postvertex somewhat more produced behind than the posterior orbits. Third longitudinal vein (R_{4+5}) setulose throughout. Cross-vein closing second basal cell very oblique, the upper outer angle of the cell acute .... *O. spinifera* (Leach).
Occipital margins of postvertex and of posterior orbits about equally produced behind. Third longitudinal vein either bare or at most with a few setæ toward apex. Cross-vein closing second basal cell nearly vertical, the upper outer angle of the cell almost square.
.... *A. erythropsis* Bigot.

4. Second basal cell (M) very short; second section of fourth longitudinal vein (M_{1+2}) about twice as long as first section of fifth ($M_{3+}Cu_1$). Frons not or hardly wider than an eye. Postvertex not divided by a transverse depression from the lower, frontal area. Third longitudinal vein (R_{4+5}) with minute setæ, as a rule on apical portion only .... *O. bisulcata* Macquart.
Second basal cell long; second section of fourth longitudinal vein at most one and one-third times the length of the first section of the fifth (often about the same length) 5

5. Third longitudinal vein (R_{4+5}) distinctly setulose throughout. Postvertex not divided by a transverse depression from the lower, frontal area. Frons narrow, not or hardly wider than an eye
.... *O. fumipennis* (Sahlberg).
Third longitudinal vein bare or at most with a few minute setæ on apical portion .... 6.

6. Postvertex not divided by a transverse depression from the lower, frontal area, extending as one smooth and shiny plate from the occiput to the fronto-clypeus. Frons at least one and one-third times as wide as an eye. Wing 7 to 9 mm. long .... *O. fossulata* Macquart.

Postvertex divided by a slight transverse depression into an upper, smooth and shiny area and a lower (frontal) portion which is more or less dull. Frons about one and one-fifth times as wide as an eye, rarely slightly more. Wing 6 to 8 mm. long........................*O. coriacea* v.d. Wulp.

The synonymy, characters, distribution and hosts of the several species will be fully discussed later. The following remarks are preliminary:

Olfersia sordida Bigot

According to Mr. J. E. Collin, Bigot's type is a male and shows the characters here given for the species. Originally described from Guatemala, *O. sordida* is widely distributed in North America. I have seen it from Oregon, Louisiana, Florida, the Bahamas, St. Thomas (W. I.), Jamaica, Trinidad, Mexico and Panama. The usual host is the Brown Pelican, *Pelecanus occidentalis* Linnaeus; but I have also seen it from the Florida Cormorant, *Phalacrocorax auritus floridanus* (Audubon).

Olfersia spinifera (Leach)

I regard *Ornithomyia unicolor* Walker, *Olfersia courtilleri* "Fairmaire" Courtiller, and *Olfersia sulcifrons* C. G. Thomson as synonyms of *O. spinifera.* I have seen specimens of true *spinifera* from Florida, Louisiana, the Bahamas, the Galapagos, the coast of Brazil, Nihoa Island (near Hawaii), and the Solomon Islands. Most specimens came from Frigate or Man-o-War birds (species of *Fregata*); but I have seen a few taken off Pelicans and Cormorants.

Olfersia erythropsis Bigot

This species has been generally confused with *O. spinifera.* It is identical with *Pseudolfersia diomedeæ* Coquillett, the types of which I have seen at the U. S. National Museum. The type of *O. erythropsis,* studied by Mr. J. E. Collin, has all the characters of *diomedeæ.* I have seen the species from the Bahamas, Desecheo Island (near Porto Rico), the Galapagos, Moorea (one of the Tahiti Group), and Ponape (one of the Caroline Islands). The hosts known to me are the Albatross, *Diomedea irrorata* Salvin; the Red-tailed Tropic-bird, *Phaëthon rubricauda* Boddaert; the White-bellied Booby, *Sula leucogaster* (Boddaert), and the Small Noddy, *Anous minutus* Boie.

Olfersia bisulcata Macquart

The type of this species passed into the Bigot Collection and is now the property of Mr. J. E. Collin. According to his detailed account, it has all the characters of the well-known *Olfersia vulturis* van der Wulp, a name which will pass in the synonymy. *O. bisulcata,* originally described from Chile, is a common species throughout Central and South America. I have seen it from Mexico, Yucatan, Guatemala, Panama, Venezuela, Brazil, Bolivia, Peru, and British Guiana. *O. vulturis* was described from Costa Rica. The usual hosts are the South American Vultures, *Catharista urubu* (Vieillot) [=*Coragyps atratus* (Meyer)], *Gypagus* (or *Sarcoramphus*) *papa* (Linnaeus), and *Cathartes aura* (Linnaeus); but there are also records from Turkey Buzzard, smaller Hawks and Condor.

Olfersia fumipennis (Sahlberg)

Pseudolfersia maculata Coquillett, of which I saw the holotype at the U. S. National Museum, is in my opinion identical with *O. fumipennis,* originally described from Finland. The species appears to be very rare in Europe, since I have been unable to find another record from that part of the world. In North America, however, it is one of the common hippoboscids. I have seen specimens from Vermont, Massachusetts, New Hampshire, Wisconsin, Michigan, Minnesota, New York, New Jersey, Pennsylvania, Virginia, North Carolina, Florida, Louisiana, Texas, Kansas, and Cuba. In most cases the host is the Osprey or Fish-hawk, *Pandion haliaetus* (Linnaeus) [typical form in Finland; race *carolinensis* (Gmelin) in North America]; but a few specimens have been taken off Loon, *Gavia immer* (Brünnich), Bald Eagle, *Haliaeetus leucocephalus* (Linnaeus), and Hawks.

Olfersia fossulata Macquart

Originally described from Brazil, this species is widely distributed in South America. I have seen it from Desecheo Island (near Porto Rico), Peru (near Lima, as well as on the Guano Islands), and Chile. Seven specimens from the Philippine Islands undoubtedly belong to this species. The chief hosts are certain tropical marine birds, such as the Peruvian Cormorant or Guanay, *Phalacrocorax bougainvillei* (Lesson); Belcher's Gull, *Larus belcheri* Vigors; the White Gannet, *Sula variegata* (Tschudi); and the Pelican, *Pelecanus thagus* Molina. These four birds nest in enormous numbers on the Guano Islands off the coast of Peru, where *O. fossulata* often swarms in the rookeries, even over bare rocks.

Olfersia coriacea van der Wulp

Pseudolfersia meleagridis Lutz, Neiva and da Costa Lima I regard as a synonym. Thus far I have seen *O. coriacea* from southern Mexico, Guatemala, Panama, British Guiana, Bolivia and Brazil. Its hosts are various wild gallinaceous birds, notably the Crested Curassow, *Crax globicera* (Linnaeus). The species has been discussed in an earlier paper [1932, Psyche, XXXVIII, (1931), p. 186]. It was then suggested that *Olfersia mexicana* Macquart might be the same; but, according to information recently received from Mr. E. Séguy, Macquart's type in the Paris Museum is apparently a specimen of *Ornithoctona erythrocephala* (Leach). On the other hand, Mr. J. E. Collin writes me that the specimen called "*Olfersia mexicana*" in Bigot's collection is a true *Olfersia* and not separable from *O. bisulcata* Macquart.

The following names and descriptions evidently were based upon species of *Olfersia*. Most probably they are synonyms of one or another of the forms studied above.

Olfersia aenescens C. G. Thomson, from Keeling Island, off an unknown host. The type is at the Stockholm Museum. According to Speiser, who saw the specimen, the postvertex is not divided by a transverse depression. I suggest that it was *O. fossulata* Macquart.

Olfersia mycetifera (Speiser), from Senafir, on the African shore of the Red Sea, off an Eagle. Most probably this was *O. fumipennis* (Sahlberg).

A NEW GENUS OF PHORIDÆ FROM PERU[1]

BY CHARLES T. BRUES.

On a recent visit to the United States National Museum in Washington, Dr. J. M. Aldrich showed me a very extraordinary phorid fly which had been received in a collection of Diptera obtained by R. C. Shannon at Iquitos, Peru. The individual in question bears near the base of the wing a conspicuous, button-like, heavily chitinized swelling which projects strongly above both the upper and lower surfaces of the wing membrane between the base of the third and fifth wing veins. As the specimen evidently represents an undescribed form Dr. Aldrich very kindly loaned it to me for more detailed examination. On account of certain other structural characters it must, I think, be regarded as the type of a new genus, Phymatopterella, described on a later page.

As the swelling on the wing is a very unusual type of structure I have been tempted to compare it with certain other, possibly similar, wing structures, known to occur in other insects. In the family Phoridæ it appears to be unique so far as is known. Several species, notably of the genus Megaselia from various parts of the world have the costal vein moderately or more rarely excessively swollen or thickened, but such developments represent strictly hypertrophy of the vein in question.

In one genus, Pelidnophora Borgmeier, the wing is said to bear an oval dark spot between the fifth and sixth veins. As Borgmeier[2] does not mention this further, I am led to believe that this spot is simply a pigmented area or perhaps a structure like that described by Malloch in *Megaselia conglomerata* Malloch[3]. The latter species has a brown patch at the tip of the wing between the fourth and fifth veins, due to the approximation of the very minute hairs on the surface of the wing and is quite distinct from any thickening or darkening of the wing membrane.

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[1] From the Entomological Laboratory of Harvard University.
[2] Vozes de Petropolis, Vol. 17, p. 741 (1923).
[3] Proc. U. S. Nat. Mus., Vol. 43, p. 445 (1912).

In another family of Diptera, an African species of Stenobasipteron bears a bulla or swelling near the base of the second longitudinal vein in the first basal cell. This is mentioned by Dr. Joseph Bequaert[1], who called my attention to the reference and also kindly allowed me to examine a specimen of this rare species (*S. wiedemanni* Licht). The spot lies close to the radius just below the fork which gives rise to R_{2+3}. It is darker in color than the remainder of the wing surface due to a slight thickening and denser patch of hairs. Above it is convex, below concave and not so clearly defined as Lichtwardt has figured it in his extensive paper.[2]

The bulla is distinct in both sexes, but much more prominent in the male. Certain other species of Stenobasipteron show the same structure, but to a very slight degree.

In Hymenoptera certain species of Ichneumonidæ of the subfamily Ophioninæ, particularly Henicospilus and several related genera bear on the wing membrane in the discocubital cell one or several chitinized spots or "maculæ." These are apparently structureless depositions of yellow or brown material seemingly similar to the veins, except that they are not linear, appearing as small quadrate commashaped or irregular areas. Their presence is usually associated with abnormalities of the wing surface surrounding them, involving the disappearance of the hairs which normally occur on the wing surface and sometimes marked changes in the course of the nearby veins, although the loss of hairs and the thickening and bending of veins occurs in a number of related forms where chitinous maculæ are not developed. The chitinous thickenings may be either bare or clothed with hairs. Related Hymenoptera of the family Braconidæ belonging to Gyroneuron and allied genera exhibit somewhat similar abnormalities in the venation of the fore wings which are, in this case, also associated with glabrous areas of the wing surface.

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[1] Psyche, Vol. 32, p. 17 (1925).

[2] Beiträge zur Kenntnis der Nemestriniden, Deuts. Entom. Zeitschr., 1909, pp. 113-127; 507-514; 643-651: 1910, pp. 371-388; 589-624.

Another type of structure seen on the wings of insects belonging to several diverse groups are small, thickened spots usually deeply pigmented and frequently surrounded by darkened areas that show no apparent chitinization in excess of that on the general wing surface.

These structures, which are known by the general term of nygmata, have been briefly described by Forbes (Entom. News, vol. 35, pp. 230-232, 1 pl. (1924)), who notes their presence in certain Megaloptera, Neuroptera, Trichoptera, Mecoptera and Hymenoptera. When examined in dried specimens that have been mounted in balsam, it appears probable that they represent glands and they may quite possibly be moulting fluid glands as has been suggested by Forbes (*l.c.*). In a Megalopteron (Chauliodes) they are in the form of minute tubercles, lying at the center of a small area where the wing hairs are extremely abundant and closely placed, causing a darkening of the wing surface (Fig. 4) each hair having the basal portion greatly swollen. In a hymenopteron (Arge) one prominent nygma in the second submarginal cell (Fig. 5) seems probably to be glandular in structure with strongly pigmented dendritic outgrowths apparently between the wing membranes, but in another more primitive saw-fly, Neurotoma, the nygmata are much smaller and appear to be of simpler structure.

Still other minute structures, evidently true sensillæ, occur on the stigma or on veins near the stigma. An extensive account of these in the Hymenoptera has recently been given by Hoffmeyer.[1]

The large swelling in Phymatoptera appears to be utterly unlike any of these structures except perhaps those mentioned in Henicospilus. Externally it gives no indication of glandular structure and certainly it has no visible opening. Above, it is slightly convex with the surface dull, below the surface is shining and deeply furrowed basally (*i.e.* toward the base of the wing) by six or eight furrows running parallel to the axis of the wing. Beyond this greatly thickened oval structure is another slight thickening in the wing, indicated principally by its darker color as shown in the photograph; this is not perceptibly elevated above the wing surface on either side, and is distinctly separated from the strongly thickened area.

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[1] Ueber Sensillen in den Hymenopteren-Flügeln, Entom. Medel., vol. 18, pp. 58-74: (1932).

Phymatopterella, gen. nov. (Figs. 1 and 2)

Front bristled, as in Megaselia; four post-antennal bristles, one pair of upwardly and inwardly directed antial bristles; lower frontal row of only the two lateral bristles, upper row of four, and four ocellar bristles. Costal vein long, with short setulæ; first vein entering the costa at its middle, third vein simple, not forked; four light veins: membrane of wing below the tip of the first vein with a large, dark, oval, thickened button-like thickening between the third and fifth veins; mediastinal vein not developed; antennæ small, oval, with dorsal arista. Mesopleura bare. Middle and hind tibiæ each with a double row of strong bristles.

In general structure and habitus this genus is similar to Megaselia and Phalacrotophora, but the third vein is entirely without fork at apex. The chitinous thickening on the wing membrane is, so far as I know, absolutely unique in the family Phoridæ. In Schmitz's key to genera (Revision der Phoriden, p. 87) it will run in the neighborhood of Parametopina Borgmeier or Syneura Brues to which it is obviously not related. On this account it seems necessary to propose a new generic name.

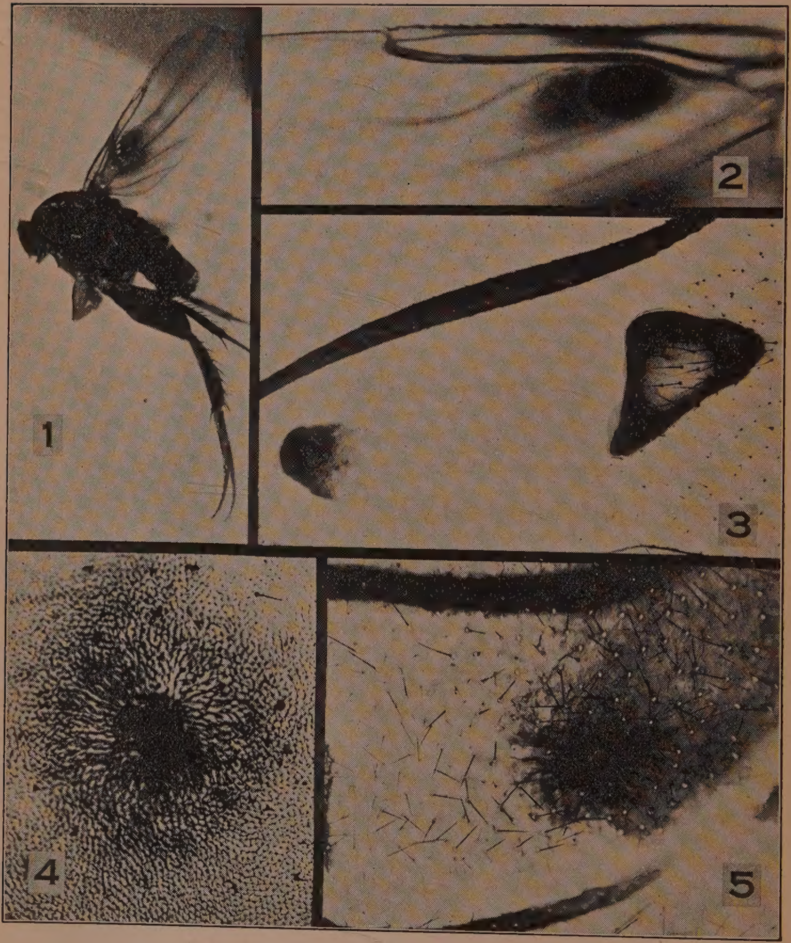
Phymatopterella shannoni, sp. nov.

♀. Length 1.9 mm.; wing 2.2 mm. Front and thorax above pale brownish yellow, the disc of the mesonotum darker; abdomen piceous with the posterior edges of the tergites whitish, more broadly so on the fifth and sixth segments; the fourth and fifth tergites each with a pair of lateral yellowish spots; coxæ and legs brownish yellow, the four hind femora much darker; pleuræ and venter black. Wings tinged with yellow; heavy veins dark, the costa whitish at tip; thin veins yellowish; thickened spot on wing disk fuscous, with a small brown cloud beyond. Halteres black. Head short, with strongly vertical front; front one-fourth longer than wide, rather conspicuously hairy; four strong, nearly equal post-antennal bristles, the lower pair much below the upper ones and close together, upper pair separated by one-third the width of the front; antial bristles but little further from the eye-margin than the lateral bristles of the lower row which set above them; middle bristles of lower row (intermedials) absent; upper frontal row of four about equidistant, forming a nearly straight line; ocellar tubercle black; post-ocellar bristles strong. Cheek with three strong bristles and a series of four short ones extending forward along the oral margin. Antennæ small, rounded, with long, pubescent arista; palpi small with moderate bristles below. Mesonotum shining, but thickly pubescent; its lateral margins fringed with closely placed bristles that are much longer behind; one pair of strong dorsocentral macrochætæ and six bristly hairs between them along the posterior margin; scutellum short and broad with two long marginal bristles. Pleuræ entirely bare, but the middle coxa bears a closely placed series of rather long appressed bristles along its anterolateral edge. Abdomen above more or less shining; second tergite not lengthened and its sides without bristly hairs, sixth tergite lengthened, as long as the third, fourth and fifth together; following ones membranous, retracted in the type specimen, the whitish apical margins of the tergites are very narrow on the first to third but broader on the fourth to sixth segments. Middle femora slightly and hind ones strongly widened and flattened; middle tibiæ with a row of about 9 strong setulæ dorsally, just inside the seam and a second row outside the seam of about seven setulæ, not extending beyond the apical third of the tibiæ; hind tibiæ with two similar rows, the outer one not extending beyond the apical third of the tibia. Wing long and narrow, barely more than one-third as wide as long (4:11), with very short, closely placed cilia; costa three-fifths as long as the wing; first vein entering the costa somewhat nearer to the humeral cross-vein than to the tip, the costa slightly swollen at the broad area of contact; third vein sharply approaching the costa then running nearly parallel with it; fourth vein curved at base, then running straight and ending slightly before the wing-tip; fifth, sixth and seventh veins nearly straight. Chitinous thickening of wing membrane broadly oval, convex and smooth above, convex below with several longitudinal corrugations basally; lying very close to the third and fifth veins near the basal fourth of the wing; beyond the button-like thickening is a subquadrate spot of about the same area of brown color, but not very evidently chitinized.

Type, one female from Iquitos, Peru; March-April, 1931 (R. C. Shannon). Type in the U. S. National Museum.

EXPLANATION OF PLATE 5.

1. *Phymatopterella shannoni* sp. nov. Lateral view.
2. *Phymatopterella shannoni* sp. nov. Upper basal part of wing, seen from above.
3. *Enicospilus purgatus* Say. Discocubital cell, showing chitinous thickenings of the wing membrane.
4. *Chauliodes pectinicornis* Linn. Nygma, in cell R_5 of front wing.
5. *Arge cœrulea* Morton. Nygma in second submarginal cell.



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